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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

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Filing Date	12/31/2001
First Named	SWAIN, Alan L.
Group Art Unit	2184
Examiner Name	n/a
Total Number of Pages in This Submission	
Attorney Docket Number	1952093.0016

ENCLOSURES *(check all that apply)*

- [ ] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment / Response
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [x] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers *(for an Application)*
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence
- [ ] Terminal Disclaimer
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- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- [ ] Proprietary Information
- [ ] Status Letter
- [x] Other Enclosure(s) *(please identify below)*:

Letter Filing Priority Document

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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Signature	
Date	**March 15, 2002**

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date:

Typed or printed name			
Signature		Date	

ATTORNEY DOCKET NO.: 1952093.0016

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re patent application of:

SWAIN et al.

Serial No.: 10/032,390 Group Art Unit: 2184

Filed: December 31, 2001

Title: System and Method for Detecting and Handling Communication Based Errors in a Wireless Transaction System

March 15, 2002

The Commissioner of Patents & Trademarks
Washington, D.C. 20231

PRIORITY CLAIM

Dear Sir:

The benefit of the filing date in Canada of a patent application corresponding to the above-identified application, is hereby claimed under Rules 37 CFR 1.55 and 35 U.S.C. 119 in accordance with the Paris Convention for the Protection of Industrial Property. A certified copy of the corresponding Canadian patent application bearing Serial No. **2,330,017** filed **December 29, 2000**, is submitted herewith.

Respectfully submitted,

March 15, 2002
Date

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La présente atteste que les documents ci-joints, dont la liste figure ci-dessous, sont des copies authentiques des documents déposés au Bureau des brevets.

This is to certify that the documents attached hereto and identified below are true copies of the documents on file in the Patent Office.

Specification and Drawing, as originally filed, with Application for Patent Serial No: **2,330,017**, on December 29, 2000, by **SOFTTRACKS ENTERPRISES LTD.**, assignee of Kevin K.M. Woo, for "Pending Persistent Reversal"

S. Gregoire
Agent certificateur/Certifying Officer

January 8, 2002
Date

Canada

(CIPO 68)
01-12-00

OPIC CIPO

The present invention relates to the field of remote electronic transaction systems, and more particularly to a method for improving the reliability of message transmission between wireless devices and a terminal.

Introduction

The following description incorporates herein by reference United States Patent Application No. 09/559,278 filed April 27, 2000 and the terms and expressions not defined in the following document are assumed defined in said incorporated reference.

This document covers the idea of Pending Persistent Reversal (PPR). PPR deals with extending a server-side state machine out to stateless micro-browser based devices. PPR is not considered a specific financial transaction. It is the combination of using MTCP reversal requests and negotiating a sequencing algorithm with the mobile device. The goals of PPR are th following:

- Detect duplicate messages from a mobile device.
- Detect a possible undelivered message from a mobile device.
- Implement MTCP reversals to avoid out of balance situations at the bank.

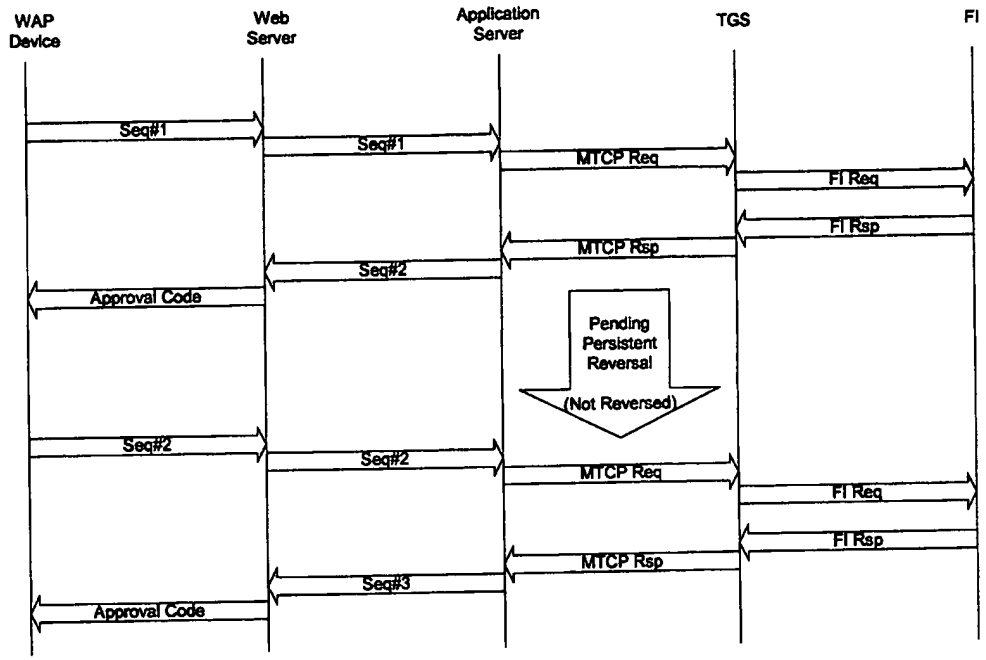
PPR Specifics

For each request received by the application server business logic, the application server processes the request. Once the request has been processed successfully, the request is given a status of Pending Persistent Reversal. This status is necessary, as the application server cannot determine if the mobile device has received the response until the next request is received. Based on the sequence number of the next incoming request, the business logic will either set the status of the previous transaction to completed, or the business logic will reverse the previous transaction.

Control of the sequence number is handled by the business logic within the application server. The business logic attaches the next sequence number expected by the mobile device on the outgoing response message. The payment application kept at the web tier keeps this sequence number and downloads it as a hidden field on the next set of user interface cards. The next request received by the mobile device can be one of three possibilities: the proper sequence number is sent, the previous sequence number is sent with a duplicate of the pr vious request, or the previous sequence number is sent with a different request.

Scenario One

1. A request is sent from the WAP devic with sequence number 1 and is received by the payment application.
2. The payment application forwards the request with sequence number 1 to the application server business logic in the form of an XTPI message.
3. The application server business logic sends the request to the TGS as an MTCP message.
4. The TGS processes the transaction by sending the request to the FI.
5. The FI sends the response to the TGS.
6. The TGS sends the response to the application server business logic in the form of an MTCP response message.
7. The application server business logic determines the next sequence number as 2. The response of the transaction along with the next sequence number is sent to the payment application in the web tier.
8. The status of the transaction is set to pending persistent reversal.
9. The response is displayed on the mobile device.
10. Once the user of the mobile device attempts the next transaction, the payment application sends the user interface (WML deck) along with the sequence number 2 to the mobile device.
11. A new transaction is sent from the device with sequence number 2 to the payment application.
12. The payment application forwards the request with sequence number 2 to the application server business logic.
13. The business logic determines that the request contains the next sequence number and sets the status of the previous transaction to completed.
14. The next transaction is processed.



Scenario Two

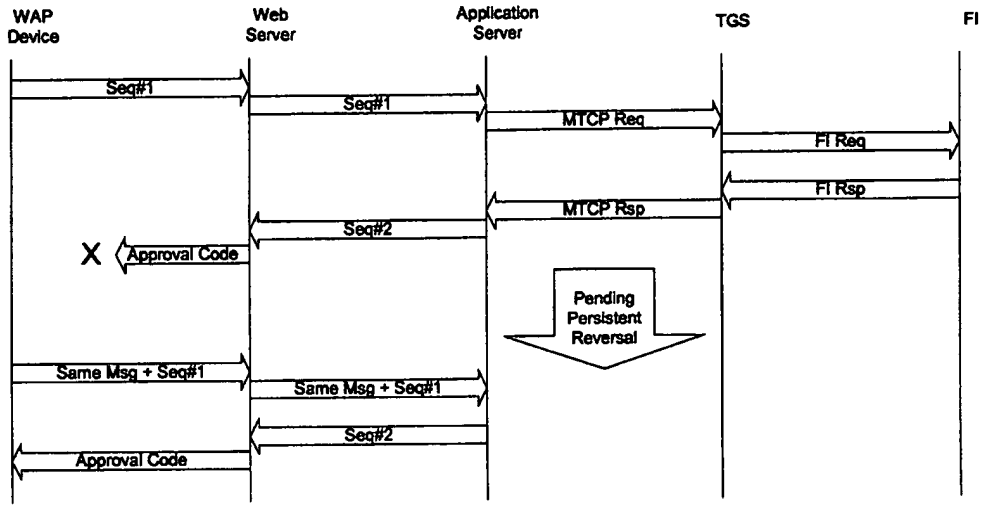
1. A request is sent from the WAP device with sequence number 1 and is received by the payment application.
2. The payment application forwards the request with sequence number 1 to the application server business logic in the form of an XTPI message.
3. The application server business logic sends the request to the TGS as an MTCP message.
4. The TGS processes the transaction by sending the request to the FI.
5. The FI sends the response to the TGS.
6. The TGS sends the response to the application server business logic in the form of an MTCP response message.
7. The application server business logic determines the next sequence number as 2. The response of the transaction along with the next sequence number is sent to the payment application in the web tier.
8. The status of the transaction is set to pending persistent reversal.
9. The response cannot be displayed on the mobile device, as the message has been lost on the wireless downlink.

10. The user does not see the response and attempts to resend the transaction. Th transaction request is sent with sequence number 1 to the payment application.

11. The payment application forwards the request with sequence number 1 to the application server business logic in the form of an XTPI message.

12. The business logic determines an identical request has been received. Since the business logic retains the response for the previous transaction, the response is sent back to the payment application with sequence number 2.

13. The response is received by the mobile device.



Scenario Three

1. A request is sent from the WAP device with sequence number 1 and is received by the payment application.

2. The payment application forwards the request with sequence number 1 to the application server business logic in the form of an XTPI message.

3. The application server business logic sends the request to the TGS as an MTCP message.

4. The TGS processes the transaction by sending the request to the FI.

5. The FI sends the response to the TGS.

6. The TGS sends the response to the application server business logic in the form of an MTCP response message.

7. The application server business logic determines the next sequence number as 2. The response of the transaction along with the next sequence number is sent to the payment application in the w b tier.

8. The status of the transaction is set to pending persistent reversal.

9. The response cannot be displayed on the mobile device, as the message has been lost on the wireless downlink.

10. The user does not see the response and attempts to resend the transaction. However, the user chooses to change some of the fields before resubmitting the request. The modified transaction request is sent with sequence number 1 to the payment application.

11. The payment application forwards the request with sequence number 1 to the application server business logic in the form of an XTPI message.

12. The business logic determines a different transaction has been received with sequence number 1. In this case, the business logic determines that previous transaction has been lost and attempts to perform a reversal on the previous transaction.

13. Once the reversal request has been processed successfully, the application server business logic sends the modified transaction request to the TGS as an MTCP message.

14. The TGS processes the transaction by sending the request to the FI.

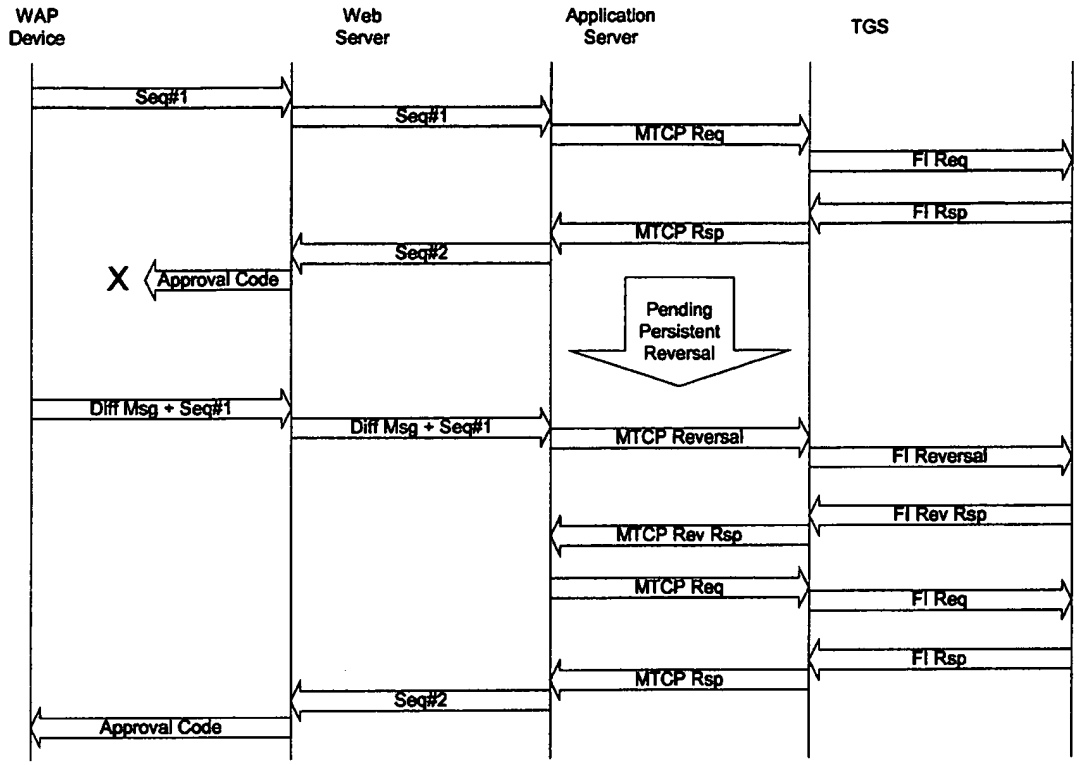
15. The FI sends the response to the TGS.

16. The TGS sends the response to the application server business logic in the form of an MTCP response message.

17. The application server business logic determines the next sequence number as 2. The response of the transaction along with the next sequence number is sent to the payment application in the web tier.

18. The status of the transaction is set to pending persistent reversal.

19. The response is displayed on the mobile device.


WAP Device
Web Server
Application Server
TGS
Seq#1
Seq#1
MTCP Req
FI Req
FI Rsp
MTCP Rsp
Seq#2
X
Approval Code
Pending Persistent Reversal
Diff Msg + Seq#1
Diff Msg + Seq#1
MTCP Reversal
FI Reversal
FI Rev Rsp
MTCP Rev Rsp
MTCP Req
FI Req
FI Rsp
MTCP Rsp
Seq#2
Approval Code